

**ONKYO® SERVICE MANUAL****Audio Video Control Receiver  
MODEL TX-SV343****Black model**

|           |                          |
|-----------|--------------------------|
| BMDN/BMDC | 120V AC, 60Hz            |
| BMP/BMPT  | 230V AC, 50Hz            |
| BMGK/BMWT | 120V/220V-230V 50Hz/60Hz |
| BMPA      | 220V AC, 60Hz            |

**SAFETY-RELATED COMPONENT WARNING!!**

COMPONENTS IDENTIFIED BY MARK  $\Delta$  ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PARTS NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

**ONKYO®  
AUDIO COMPONENTS**

# SPECIFICATIONS

## TX-SV343

### AMPLIFIER SECTION

#### Power Output

USA & Canadian models: Stereo Mode

**60 watts per channel, min. RMS into 8 ohms, both channels driven from 20 Hz to 20 kHz with no more than 0.08% THD.**

Surround Mode

Front L/R Channels  
2 x 50 W (1 kHz, 0.08%, 8 ohms)

Center Channel

50 W (1 kHz, 0.15%, 8 ohms)

Rear Channels (Rear channel only driven)

15 W + 15 W (1 kHz, 0.3%, 8 ohms)

European models:

Stereo mode

2 x 60 watts at 6 ohms (DIN)

Surround mode

Front L/R and Center Channels

3 x 50 watts at 6 ohms (DIN)

Rear Channels (Rear channel only driven)

15 watts + 15 watts at 6 ohms (DIN)

Asian models:

Stereo mode

2 x 80 watts at 6 ohms, 1 kHz (EIAJ)

Surround mode

Front L/R and Center Channels

3 x 65 watts at 6 ohms, 1 kHz (EIAJ)

Rear Channels (Rear Channel only driven)

20 watts + 20 watts at 6 ohms, 1 kHz (EIAJ)

Total Harmonic Distortion:

0.08% at rated power (Front)

IM Distortion:

0.08% at rated power (Front)

Damping Factor:

60 at 8 ohms (Front)

Input Sensitivity and Impedance

Phono: 2.5 mV, 50 kohms

Line (CD, Tape, TV/AUX Video-1, 2):

200 mV, 50 kohms

Video (Video-1,2): 1 Vp-p, 75 ohms

Output Level and Impedance:

Rec Out (Tape): 200 mV, 2.2 kohms

Out (Video-2): 200 mV, 2.2 kohms

Pre Out (Subwoofer): 1 V, 2.2 kohms

Video (Video-2, Monitor):

1 Vp-p, 75 ohms

Phono Overload: 120 mV RMS, at 1 kHz, 0.5% T.H.D.

Frequency Response: 20 Hz to 30 kHz,  $\pm 1$  dB

RIAA Deviation: 20 Hz to 20 kHz,  $\pm 0.8$  dB

Tone Control

Bass:  $\pm 10$  dB at 100 Hz

Treble:  $\pm 10$  dB at 10 kHz

Signal-to-Noise Ratio

Phono: 80 dB (IHF A, 5 mV input)

CD/Tape: 100 dB (IHF A)

-50 dB

### VIDEO SECTION

Signal sensitivity and impedance:

1 Vp-p, 75 ohms  
(VDP/VCR input, output)

### TUNER SECTION

#### FM

Tuning Range:

U.S.A. & Canadian models: 87.5 — 108.0 MHz (100 kHz steps)

Other areas: 87.50 — 108.00 MHz (50 kHz steps)

Usable Sensitivity

Mono: 11.2 dBf, 1.0  $\mu$ V (75 ohms IHF)

Stereo: 17.2 dBf, 2.0  $\mu$ V (75 ohms IHF)

50dB Quieting Sensitivity

Mono: 18.2 dBf, 2.2  $\mu$ V (75 ohms)

Stereo: 38.2 dBf, 22  $\mu$ V (75 ohms)

Capture Ratio:

1.5 dB

Image Rejection Ratio

U.S.A. & Canadian models: 40 dB

Other area models: 85 dB

IF Rejection Ratio:

90 dB

Signal-to-Noise Ratio

Mono: 73 dB (IHF)

Stereo: 67 dB (IHF)

Alternate Channel Attenuation

Mono: 55 dB (IHF)

Selectivity: 50 dB (DIN,  $\pm 300$  kHz, 40 kHz Devi.)

AM Suppression Ratio: 50 dB

Total Harmonic Distortion

Mono: 0.15%

Stereo: 0.25%

Frequency Response: 30 Hz — 15 kHz,  $\pm 1.5$  dB

Stereo Separation: 45 dB at 1 kHz

30 dB at 100 Hz — 10 kHz

#### AM

Tuning Range

U.S.A. & Canadian models: 530—1,710 kHz (10 kHz steps)

European models: 522—1,611 kHz (9 kHz steps)

Worldwide models: 531—1,602 kHz (9 kHz steps),

530—1,710 kHz (10 kHz steps)

Usable Sensitivity: 30  $\mu$ V

Image Rejection Ratio: 40 dB

IF Rejection Ratio: 40 dB

Signal-to-Noise Ratio: 40 dB

Total Harmonic Distortion: 0.7%

### GENERAL

Power Supply

U.S.A. & Canadian models: AC 120 V, 60 Hz

European & Australian models: AC 230 V, 50 Hz

Worldwide models: AC 230-220 V and 120 V switchable, 50/60 Hz

Power Consumption

U.S.A. & Canadian models: 2.7 A

Other area models: 220 W

Dimensions (W x H x D): 435 x 150 x 322 mm

17-1/8" x 5-7/8" x 12-11/16"

Weight: 8.2 kg, 18.1 lbs.

### REMOTE CONTROL RC-328S

Transmitter:

Infrared

Signal range:

Approx. 5 meters, 16 ft.

Power supply:

Two "AA" batteries (1.5 V x 2)

Specifications and features are subject to change without notice.

# SERVICE PROCEDURES

## 1. Replacing the fuses

 This symbol located near the fuse indicates that the fuse used is fast operating type. For continued protection against fire hazard, replace with same type fuse. For fuse rating refer to the marking adjacent to the symbol.

 Ce symbole indique que le fusible utilisé est à rapide. Pour une protection permanente, n'utiliser que des fusibles de même type. Ce dernier est indiqué là où le présent symbole est apposé.

| Circuit No. | Part No. | Description  |
|-------------|----------|--|
| F901        | 252164Y  | 5A-UL/T-237, Primary<br><D/W>  |
| F902        | 252075   | 2.5A-SE-EAK, Primary<br><W,K,A>  |
| F902,F903   | 252075Y  | 2.5A-SE-EAK, Primary<br><P,T>  |
| NOTE:       |          | <D>: 120V model only<br><P>: 230V model only<br><W>: Worldwide model only<br><K>: Korean model only<br><A>: Australian model only<br><T>: Taiwanese model only |

## 2. To Initialize the unit

This device employs a microprocessor to perform various functions and operations. If interference generated by an external power supply, radio wave, or other electrical source results in accident which causes the specified operations and functions to operate abnormally.

To perform a result, please follow the procedure below.

1. Press and hold down the VIDEO-1 button, then press the SPEAKER-A button.
2. After "clear" is displayed, the preset memory and each mode stored in then memory, such as surround, are initialized and will return to the factory settings.

## 3. Safety-check out

(Only U.S.A. model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer. Connect the insulating-resistance tester between the plug of power supply cord and the screw on the back panel.

Specifications:  $3.3 \text{ Mohm} \pm 10\%$  at 500V.

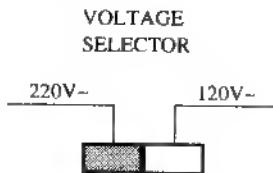
## 4. Change of voltage

Worldwide models are equipment with a voltage selector to conform with local power supplies. This switch is located on the back panel.

Be sure to set this switch to match the voltage of the power supply in your area before turning the power switch on.

This switch is set to 220V at the factory. Voltage is changed by

sliding the groove in the switch with the screwdriver to the right or left. Confirm that the switch has been moved all the way to the right or left before turning the power switch on.



## 5. Memory preservation

This unit does not require memory preservation batteries.

A built-in memory power back-up system preserves contents of the memory during power failures and even when the unit is unplugged.

The unit must be plugged in and the power switch turned on and off once in order to charge the back-up system. Note that since this is not a permanent memory, the power switch must be turned on and off a few times each month to keep the back-up system operative.

The period of the time during which memory contents are preserved after power has last been turned off varies depending on climate and placement of the unit. On the average, memory contents are protected over a period of 3 to 4 weeks (a minimum of 2 weeks) after the last time power has been turned off. This period is shorter when the unit is exposed to very high humidity or used in an area with an extremely humid climate.

## 6. Setting the tuning step frequency

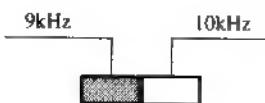
Worldwide models are equipped with a step band selector switch. This switch is located on the back panel. This switch is set to 9 kHz at the factory, but may have to be reset to 10 kHz depending on the area where the unit is used.

AM band step

Europe: 9 kHz

U.S.A.: 10 kHz

AM FREQ.  
STEP

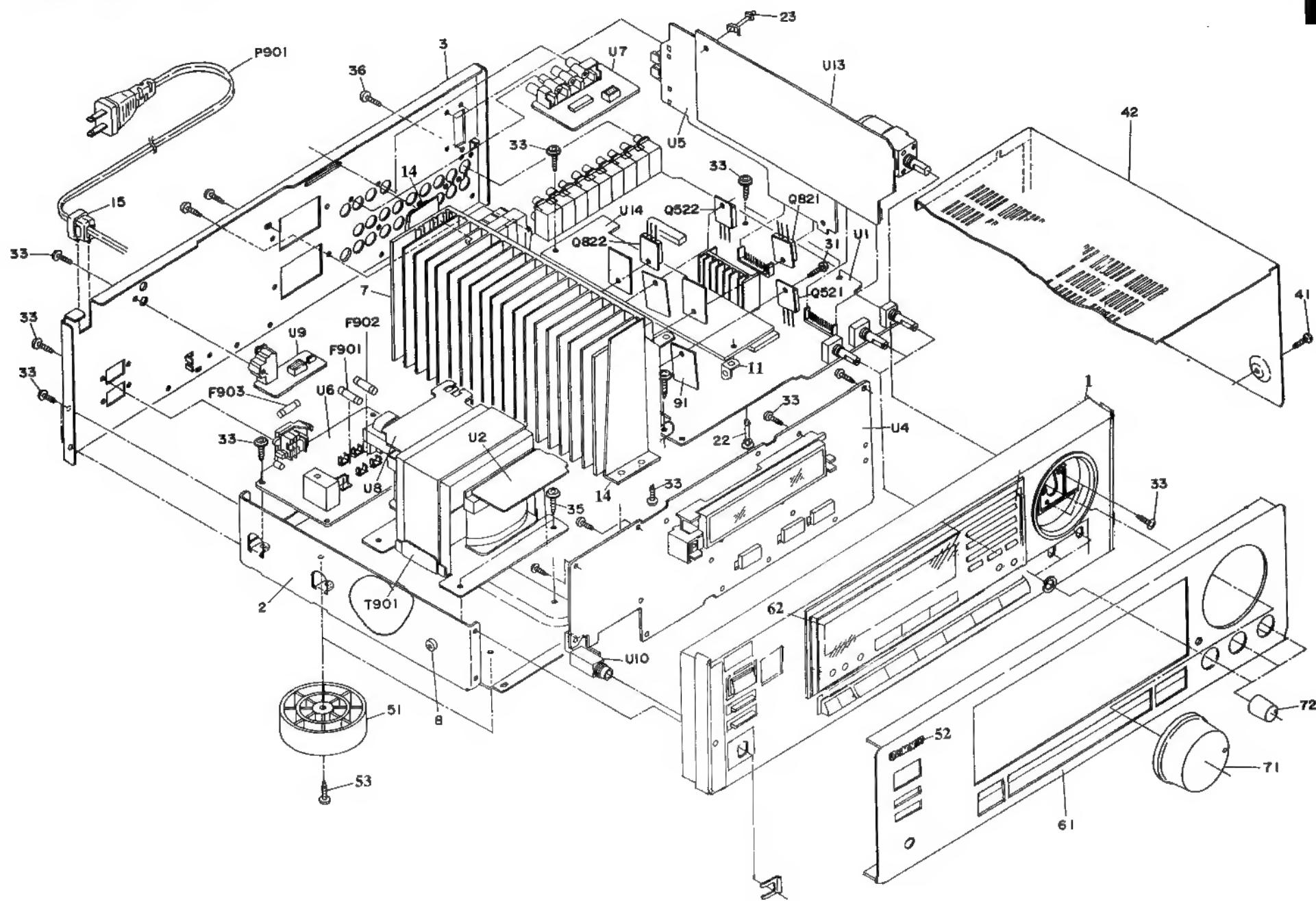


## 7. Changing the band step

With the exception of the worldwide models, a tuning step selector switch is not provided. When you change the band step, change the parts as shown below.

|      | To 10 kHz | To 9 kHz |
|------|-----------|----------|
| R727 | Remove    | 10 ohm   |
| R724 | 10 k ohm  | Remove   |

## EXPLODED VIEW



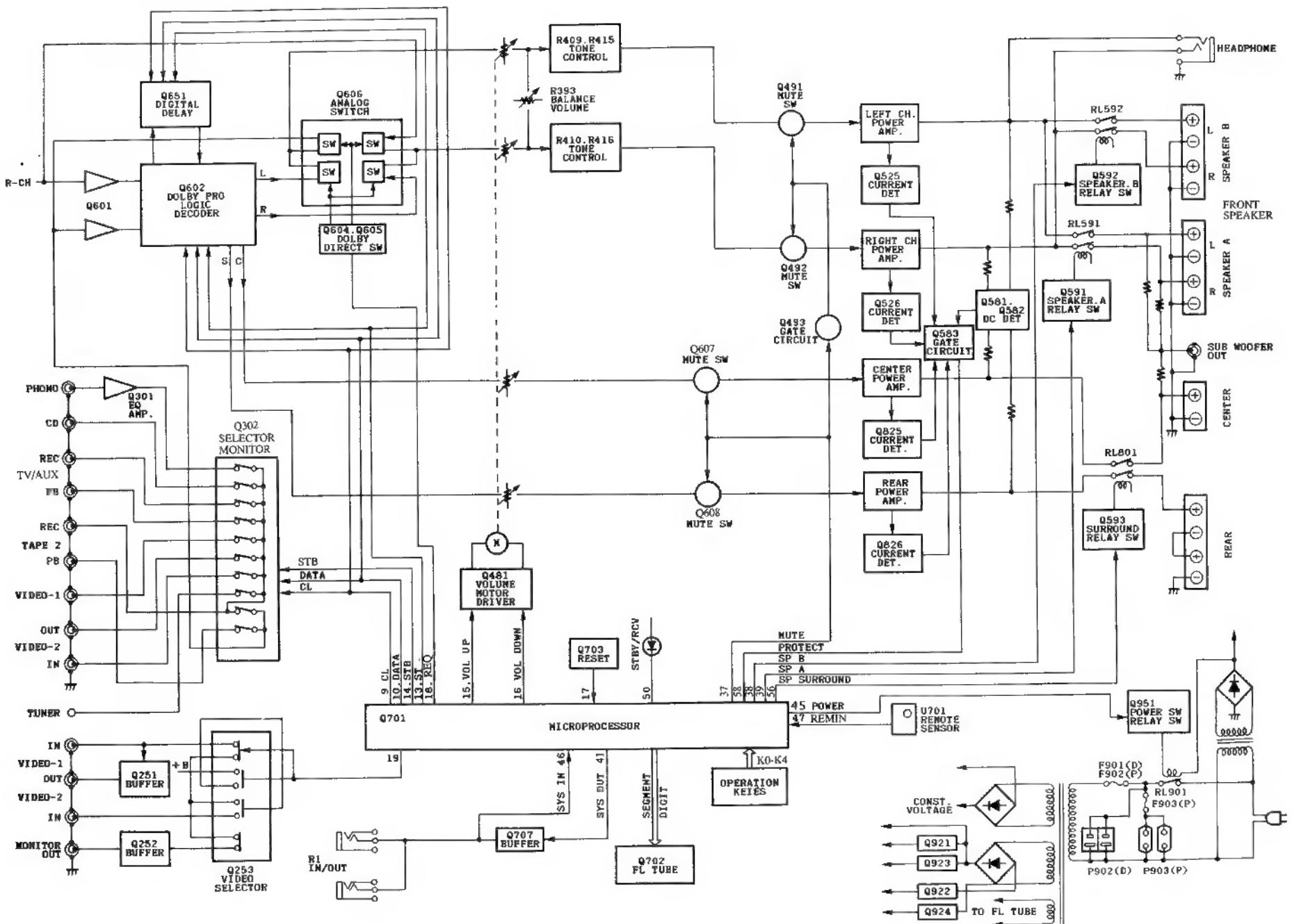
# PARTS LIST

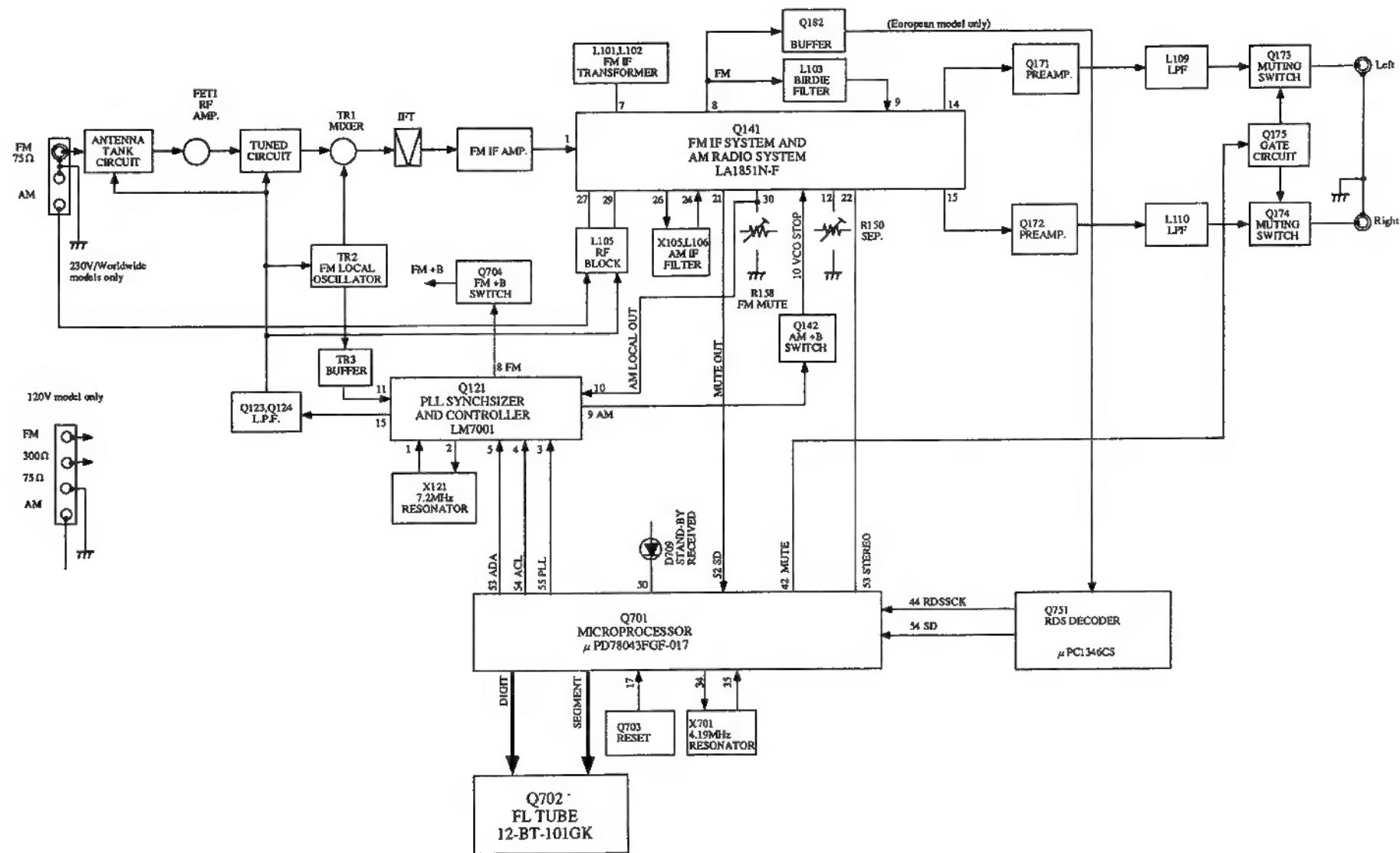
| PARTS LIST |                      |                                      |           |  |  |   |   |             |
|------------|----------------------|--------------------------------------|-----------|--|--|---|---|-------------|
| REF.NO.    | PART NO.             | DESCRIPTION                          | REF.NO.   | PART NO.   | DESCRIPTION                                    | REF.NO.   | PART NO.  | DESCRIPTION |
| 1          | 2710956AY            | Front Bracket                        | P901      | 253192HITY or ▲ AS-UC-6#18(SPT-2), AC Cord <D>                     |  | 1A722574-1EY  | NAETC-5874-1E, Video circuit pc board ass'y <K> |             |
| 2          | 27100321AY           | Chassis                              |           | 253194MARY ▲   |  | 1A722574-1FY  | NAETC-5874-1F, Video circuit pc board ass'y <A> |             |
| 3          | 27122276Y            | Rear Panel <D>                       |           | 253193HITY or ▲ AS-CEE, AC Cord <P,T>                              |  | 1A722577-1AY  | NAETC-5877-1A, Primary pc board ass'y <D>       |             |
|            | 27122277Y            | Rear Panel <P>                       |           | 253195MARY ▲   |  | 1A722577-1BY  | NAETC-5877-1B, Primary pc board ass'y <P>       |             |
|            | 27122278Y            | Rear Panel <T>                       |           | 253213WSE or ▲ KS-AS, AC Cord <K>                                  |  | 1A722577-1CY  | NAETC-5877-1C, Primary pc board ass'y <W>       |             |
|            | 27122279Y            | Rear Panel <W>                       |           | 253211WSE ▲  |  | 1A722577-1DY  | NAETC-5877-1D, Primary pc board ass'y <T>       |             |
|            | 27122280AY           | Rear Panel <K>                       |           | 253197HITY ▲ AS-SAA, AC Cord <A>                                   |  | 1A722577-1EY  | NAETC-5877-1E, Primary pc board ass'y <K>       |             |
|            | 27122335Y            | Rear Panel <A>                       |           | 253233KAW ▲ AS-CEE-2, AC Cord <W>                                  |  | 1A722577-1FY  | NAETC-5877-1F, Primary pc board ass'y <A>       |             |
| 7          | 271600377Y           | Radiator                             | P904,P905 | 25051570Y ▲ NSCT-2P1357, AC Outlet <A>                             |  | 1A722575-1AY  | NAETC-5875-1A, RI Terminal pc board ass'y <D>   |             |
| 11         | 27141530AY           | Retainer                             |           | 25051266 ▲ NSCT-2P1056, AC Outlet <K>                              |  | 1A722575-1BY  | NAETC-5875-1B, RI Terminal pc board ass'y <P>   |             |
| 14         | 27141672Y            | Retainer (H)                         |           | Q521,Q522 2203063 * 2SC5198-O, Transistor                          |  | 1A722575-1CY  | NAETC-5875-1C, RI Terminal pc board ass'y <W>   |             |
| 15         | 27300730 ▲           | Cord Bushing, #2271                  |           | Q523,Q524 2203053 * 2SA1941-O, Transistor                          |  | 1A722575-1DY  | NAETC-5875-1D, RI Terminal pc board ass'y <T>   |             |
| 21         | 27190991             | Holder, HGPS-16F                     | Q821      | 2203063 * 2SC5198-O, Transistor                                    |  | 1A722575-1EY  | NAETC-5875-1E, RI Terminal pc board ass'y <K>   |             |
| 22         | 27190266Y            | Holder, KGLS-12RF                    | Q822      | 2203043 * 2SC5197-O, Transistor                                    |  | 1A722575-1FY  | NAETC-5875-1F, RI Terminal pc board ass'y <A>   |             |
| 23         | 27190896Y            | Holder, KGLS-10S                     | Q823      | 2203053 * 2SA1941-O, Transistor                                    |  | 1A722578-1AY  | NAETC-5878-1A, Headphone Terminal pc            |             |
| 31         | 801433               | 3MS8W.SW+14B(BC), Self-tapping screw | Q824      | 2203033 * 2SA1940-O, Transistor                                    |  | board ass'y <D>   |   |             |
|            |                      |                                      | T901      | 2301221 ▲ NPT-1284D, Power Transformer <D>                         |  | 1A722578-1BY  | NAETC-5878-1B, Headphone Terminal pc            |             |
|            |                      |                                      |           | 2301222 ▲ NPT-1284P, Power Transformer <P,A,T>                     |  | board ass'y <P>   |   |             |
|            |                      |                                      |           | 2301223 ▲ NPT-1284DG, Power Transformer <W,K>                      |  | 1A722578-1CY  | NAETC-5878-1C, Headphone Terminal pc            |             |
| 33         | 838130088            | 3TTB+8B, Self-tapping screw          | U1        | 1A722564-1AY NAAR-5864-1A, Main circuit pc board ass'y <D>         |  | board ass'y <W>   |   |             |
| 35         | 830440089            | 4TTC+8C(BC), Self-tapping screw      |           | 1A722564-1BY NAAR-5864-1B, Main circuit pc board ass'y <P>         |  | 1A722578-1DY  | NAETC-5878-1D, Headphone Terminal pc            |             |
| 36         | 838230088            | 3TTB+8B(NI), Self-tapping screw      |           |  | NAETC-5866-1A, Power Supply pc board ass'y <D> | board ass'y <T>   |   |             |
| 41         | 838430088            | 3TTB+8B(BC), Self-tapping screw      | U2        |  | NAETC-5866-1B, Power Supply pc board ass'y <P> | 1A722578-1EY  | NAETC-5878-1E, Headphone Terminal pc            |             |
| 42         | 28184663Y            | Top Cover                            |           |  | NAETC-5866-1B, Power Supply pc board ass'y <P> | board ass'y <K>   |   |             |
| 51         | 27175319Y            | Leg                                  | U4        | 1A722571-1AY NADIS-5871-1A, Display circuit pc board ass'y <D>     |  | 1A722578-1FY  | NAETC-5878-1F, Headphone Terminal pc            |             |
| 51a        | 28141332Y            | Cushion, t=1.5                       |           | 1A722571-1BY NADIS-5871-1B, Display circuit pc board ass'y <P>     |  | board ass'y <A>   |   |             |
| 52         | 28135244             | Badge                                |           | 1A722571-1CY NADIS-5871-1C, Display circuit pc board ass'y <W>     |  | 1A722568-1AY NAAF-5868-1A, Surround circuit pc board ass'y <D>  |   |             |
| 53         | 831430088            | 2TTW+8B(BC), Self-tapping screw      |           | 1A722571-1D NADIS-5871-1D, Display circuit pc board ass'y <T>      |  | 1A722568-1BY NAAF-5868-1B, Surround circuit pc board ass'y <P>  |   |             |
| 62         | 28191755A            | Clear Plate                          |           | 1A722571-1EY NADIS-5871-1E, Display circuit pc board ass'y <K>     |  | 1A722569-1AY NAAF-5869-1A, Center and Rear Amplifier circuit pc |   |             |
| 69         | 27211870Y            | Front Panel <D>                      |           | 1A722571-1FY NADIS-5871-1F, Display circuit pc board ass'y <A>     |  | board ass'y <D>   |   |             |
|            | 27211871Y            | Front Panel <P>                      |           | 1A722572-1AY NARF-5872-1A, Tuner circuit pc board ass'y <D>        |  | 1A722569-1BY NAAF-5869-1B, Center and Rear Amplifier circuit pc |   |             |
|            | 27211872AY           | Front Panel <T,W,K,A>                | U5        | 1A722572-1BY NARF-5872-1B, Tuner circuit pc board ass'y <P>        |  | board ass'y <P>   |   |             |
| 71         | 28325456Y            | Knob (VOL)                           |           | 1A722572-1CY NARF-5872-1C, Tuner circuit pc board ass'y <W>        |  |   |   |             |
| 72         | 28325454Y            | Knob (TONE)                          |           | 1A722572-1DY NARF-5872-1D, Tuner circuit pc board ass'y <T>        |  |   |   |             |
| 73         | 28325451Y            | Knob (POW)                           |           | 1A722572-1EY NARF-5872-1E, Tuner circuit pc board ass'y <K>        |  |   |   |             |
| 74         | 27267955Y            | Guide (POW)                          |           | 1A722572-1FY NARF-5872-1F, Tuner circuit pc board ass'y <A>        |  |   |   |             |
| 91         | 223024               | * Isolation Sheet, AC238             |           | 1A722573-1AY NAPS-5873-1A, Power Supply circuit pc board ass'y <D> |  |   |   |             |
| D911       | 22380038 or 22380274 | RBV602 or RS603M, Diode              | U6        | 1A722573-1BY NAPS-5873-1B, Power Supply circuit pc board ass'y <P> |  |   |   |             |
| P711       | 2047315012Y          | NCFCT-315012, Flexible Flat cable    |           | 1A722573-1CY NAPS-5873-1C, Power Supply circuit pc board ass'y <W> |  |   |   |             |
| F901       | 252164Y ▲            | 5A-UL, /T-237, Fuse <D,W>            |           | 1A722573-1DY NAPS-5873-1D, Power Supply circuit pc board ass'y <T> |  |   |   |             |
| F902       | 252075Y ▲            | 2.5A-SE-EAK, Fuse <K,A>              |           | 1A722573-1EY NAPS-5873-1E, Power Supply circuit pc board ass'y <K> |  |   |   |             |
|            | 252075Y ▲            | 2.5A-SE-EAK, Fuse <W>                |           | 1A722573-1FY NAPS-5873-1F, Power Supply circuit pc board ass'y <A> |  |   |   |             |
| F902,F903  | 252075Y ▲            | 2.5A-SE-EAK, Fuse <P,T>              | U7        | 1A722574-1AY NAETC-5874-1A, Video circuit pc board ass'y <D>       |  |   |   |             |
|            |                      |                                      |           | 1A722574-1BY NAETC-5874-1B, Video circuit pc board ass'y <P>       |  |   |   |             |
|            |                      |                                      |           | 1A722574-1CY NAETC-5874-1C, Video circuit pc board ass'y <W>       |  |   |   |             |
|            |                      |                                      |           | 1A722574-1DY NAETC-5874-1D, Video circuit pc board ass'y <T>       |  |   |   |             |

NOTE: THE COMPONENTS IDENTIFIED BY MARK ▲ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

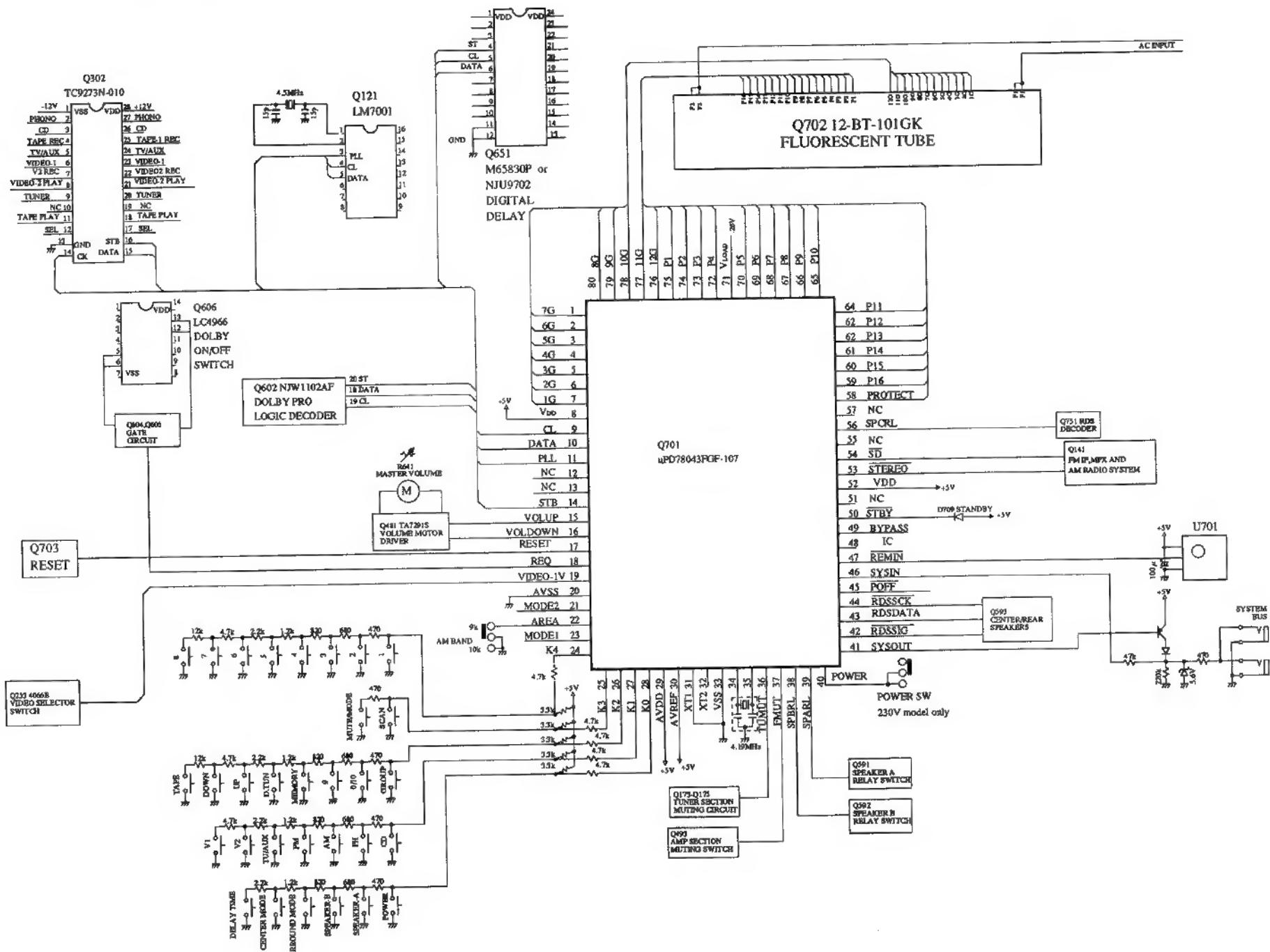
NOTE: <D>: 120V model only  
 <P>: 230V model only  
 <W>: Worldwide model only  
 <T>: Taiwanese model only  
 <K>: Korean model only  
 <A>: Australian model only

## BLOCK DIAGRAM





## MICROPROCESSOR CONNECTION DIAGRAM



# TERMINAL DESCRIPTION

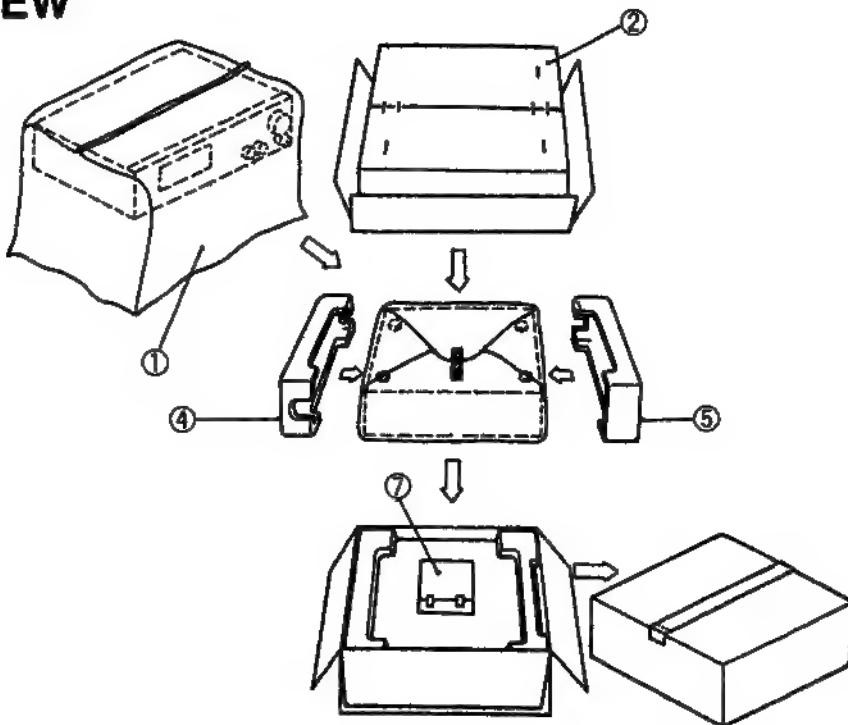
Q701  $\mu$ PD78043PGF-017

| Pin No. | Function  | I/O | Description   |
|---------|-----------|-----|---|
| 1~7     | 7G~1G     | O   | Grid control output pin. On at the high level.  |
| 8       | VDD       |     | Power supply pin (+5V)  |
| 9       | CL        | O   | Clock output pin. Connect to the terminals CK of function switch Q302, Dolby Pro Logic Decoder Q602, digital delay Q651 and PLL IC Q121.  |
| 10      | DATA      | O   | Data output pin. Connect to the terminals DATA of function switch Q302, Dolby Pro Logic Decoder Q602, digital delay Q651 and PLL IC Q121. |
| 11      | PLL       | O   | Chip enable output pin for PLL IC Q121.   |
| 12      | NC        |     |   |
| 13      | NC        |     |   |
| 14      | STB       | O   | Chip enable output pin. Connect to the terminal STB of function switch Q302.  |
| 15      | VOLUP     | O   | Volume control output pin.  |
| 16      | VOLDOWN   | O   | Volume control output pin. (Refer table 1.)   |
| 17      | RESET     | I   | System reset input pin  |
| 18      | REQ       | O   | Connect to the terminal REQ of Dolby pro logic.   |
| 19      | VIDEO-1V  | O   | Video switch control output pin. On at the high level.  |
| 20      | AVSS      |     | Ground pin of A/D converter   |
| 21      | MODE2     | I   | A or B setting input pin.   |
| 22      | AREA      | I   | Initializing input of band region   |
| 23      | MODE1     | I   | Initializing input of operation mode  |
| 24      | K4        | I   | Operation key connection pin  |
| 25      | K3        | I   | Operation key connection pin  |
| 26      | K2        | I   | Operation key connection pin  |
| 27      | K1        | I   | Operation key connection pin  |
| 28      | K0        | I   | Operation key connection pin  |
| 29      | AVDD      |     | Analogue power supply of A/D converter  |
| 30      | AVREF     |     | Reference voltage input pin of A/D converter  |
| 31      | XT1       |     | Crystal connection pin for sub system clock resonator   |
| 32      | XT2       |     | Not used.   |
| 33      | VSS       |     | Ground pin  |
| 34      | X1        |     | Resonator connection terminal for main system clock   |
| 35      | X2        |     | Connect the ceramic resonator 4.19MHz.  |
| 36      | TUMUT     | O   | Muting output pin for tuner section.  |
| 37      | FRONTMUT  | O   | Muting output pin for front amp.  |
| 38      | SPBRL     | O   | Relay control pin for speaker B   |
| 39      | CENT SP   | O   | Relay control pin for center speaker.   |
| 40      | POWER     | O   | Power source control output pin   |
| 41      | SYSCODE   | O   | System code output pin  |
| 42      | RDSSIG    | I   | Detector input pin of RDS broadcast, L:RDS broadcast  |
| 43      | RDSDATA   | I   | Data input pin from RDS decoder uPD1346CS   |
| 44      | RDSSCK    | I   | Clock input pin from RDS decoder IC uPC1346CS   |
| 45      | POFF      | I   | Power stoppage detector input pin   |
| 46      | SYSIN     | I   | System code input pin   |
| 47      | REMIN     | I   | Remote control signal input pin   |
| 48      | IC        |     | Internal connection pin. Connect to the ground terminal.  |
| 49      | BYPASS    | I   | Bypass select output pin  |
| 50      | STBY/RECV | O   | Standby and received indicator output pin   |
| 51      |           |     |   |
| 52      | VDD       |     | Power supply pin (+5V)  |
| 53      | STEREO    | I   | Detector input pin of FM stereo broadcast   |
| 54      | SD        | I   | Detector input pin of broadcast more than muting level  |
| 55      | NC        |     |   |
| 56      | SPCRL     | O   | Relay control pin for center and rear speakers.   |
| 57      | NC        |     |   |
| 58      | PROTECT   |     | Detector input pin of protection circuit.   |
| 59~70   | P16 - P5  | O   | Segment output pins. On at the high level.  |
| 71      | VLOAD     | I   | Pull-down resistor connection pin of controller and driver of FL.   |
| 72~75   | P4 - P1   | O   | Segment output pins. On at the high level.  |
| 76~80   | 12G~8G    | O   | Grid control output pins. On at the high level.   |

|             |     |     |
|-------------|-----|-----|
| Operation   | #15 | #16 |
| VOLUME UP   | H   | L   |
| VOLUME DOWN | L   | H   |
| STOP        | H   | H   |

Table 1

## PACKING VIEW



## PACKING LIST

| REF.NO. | PART NO.     | DESCRIPTION                              |
|---------|--------------|--|
| 1       | 29100034-1AY | Styren Bag 850x650                       |
| 2       | 29053093Y    | Carton Box <D>                           |
|         | 29053094Y    | Carton Box <W,T,K,A>                     |
|         | 29053095Y    | Carton Box <P>                           |
| 4,5     | 29091763Y    | Pad (AS), L and R                        |
|         |              | Accessory bag ass'y                      |
|         | 232140       | NMA-3057, AM Loot Antenna                |
|         | 292111       | FM Antenna <D>                           |
|         | 292112       | FM Antenna <P>                           |
|         | 24140328Y    | RC-328S, Remote Control transmitter      |
|         | 3010194      | UM-3, Batteries                          |
|         | 25055018     | CV-1K-1, Conversion Plug <W>             |
|         | 25065462     | YAE21-0237, FM antenna Adapter <W,P,K,A> |
|         | 29361786Y    | Label (MALAYSIA) <P,K>                   |
|         | 29362091Y    | Label (EAN) A5 <P,T,K>                   |
|         | 29362003-1   | Label <D>                                |
|         | 29360708Y    | Label (UL) <D>                           |
|         | 29362003-1Y  | Label (UPC) AS <D>                       |
|         | 29342360Y    | Instruction Manual, E                    |
|         | 29342361Y    | Instruction Manual, U3FSI <P>            |
|         | 29342362Y    | Instruction Manual, U3GSwD <P>           |
|         | 29342364Y    | Instruction Manual, T <W,T>              |
|         | 29355133AY   | Instruction Sheet (DBP) <P>              |
|         | 29355221     | Instruction Sheet <K>                    |
|         | 29365019BY   | Warranty Card <D>                        |
|         | 29358002KY   | Service Station List <D>                 |

# ADJUSTMENT PROCEDURES

## Preparation

### 1. Input

FM mono: 1 kHz, 75 kHz devi., 60 dB/  $\mu$ V

FM stereo: 1 kHz, 75 kHz devi., 60 dB/  $\mu$ V

Pilot signal :19 kHz,7.5 kHz devi.

AM : 400Hz ,30% mod.

### 2. Outputs

Connect the non-inductive type resistors of 8 ohms to the speaker terminals A unless otherwise noted.

### 3. Standard Knob Positions

|                             |             |
|-----------------------------|-------------|
| Master Volume Control ..... | Maximum     |
| Bass Control .....          | Center      |
| Treble Control .....        | Center      |
| Balance Control .....       | Center      |
| Input Selector.....         | CD          |
| Tape (Monitor ).....        | Off         |
| Muting .....                | Off         |
| Speaker .....               | A on, B off |
| Dolby Surround .....        | Off         |
| Center Mode.....            | Wide Band   |
| Delay Time.....             | 20 ms       |
| Center Level .....          | 0 dB        |
| Rear Level .....            | 0 dB        |

## IDLING CURRENT ADJUSTMENT

1. Connect the DC voltmeter to the terminals P521, P522 and P821(VCT and IID) on the main circuit pc board.
2. Adjust the trim resistors R533, R534 and R837 so that the indicator of voltmeter becomes 2.0mV.
3. After 4 - 6 minutes of heat runing, readjust R533 , R534 and R837 to get 5.5 - 6.0mV.

NOTE: Set Volume knob to the minimum position.

Set the unit to the test mode.

1. Press and hold down the CD button, then press the Power button.
2. "TEST-" is displayed on the display.
3. While "TEST-" is displayed, press the FM key.

## FM ADJUSTMENT

| Item              | Step | Connection of instrument | FM SG output   | Stereo modulator output    | Tuning frequency | Output indicator                | Adjustment point     | Adjust for                | Remarks   |
|-------------------|------|--------------------------|--|----------------------------|------------------|---------------------------------|----------------------|---------------------------|---|
| FM IF/RF          | 1    | Fig.1                    | 99.0MHz<br>1kHz 75kHz devi.<br>65dBf(60dB)                             | —                          | 99.0MHz          | DC voltmeter                    | L101                 | 0±20mV                    | FM MUTE/MODE switch:ON/STEREO<br>Repeat the steps 1 and 3 until no further adjustment is necessary. |
|                   | 2    |                          |  |                            |                  | AC voltmeter                    | IFT on the front end | Maximum                   |   |
|                   | 3    |                          |  |                            |                  | Distortion analyzer             | L102                 | Minimum                   |   |
| Stereo Distortion |      | Fig.2                    | 99.0MHz Ext. mod. 65dBf(60dB)  | Channel L or R 1kHz        | 99.0MHz          | Distortion analyzer             | IFT on the front end | Minimum                   | Don't turn more than ±180°  |
| Stereo Separation | 1    | Fig.2                    | 99.0MHz Ext. mod. 65dBf(60dB)  | Channel L 1kHz             | 99.0MHz          | Channel R AC voltmeter          | R150                 | Minimum                   | Maximum and same separation   |
|                   | 2    |                          |  | Channel R 1kHz             |                  | Channel L AC voltmeter          |                      | Minimum                   |   |
| Muting Level      |      | Fig.2                    | 99.0MHz<br>21.2dBf(16dB)<br><P/W Models><br>23.2dBf(18dB)<br><D model> | —                          | 99.0MHz          | Oscilloscope or TUNED indicator | R158                 | Signal output or light on |   |
| RDS               |      | Fig.3                    | 99.0MHz Ext. mod. 40dB   | RDS data or 57kHz 3% devi. | 99.0MHz          | Oscilloscope                    | R786                 | Maximum                   | European model only   |

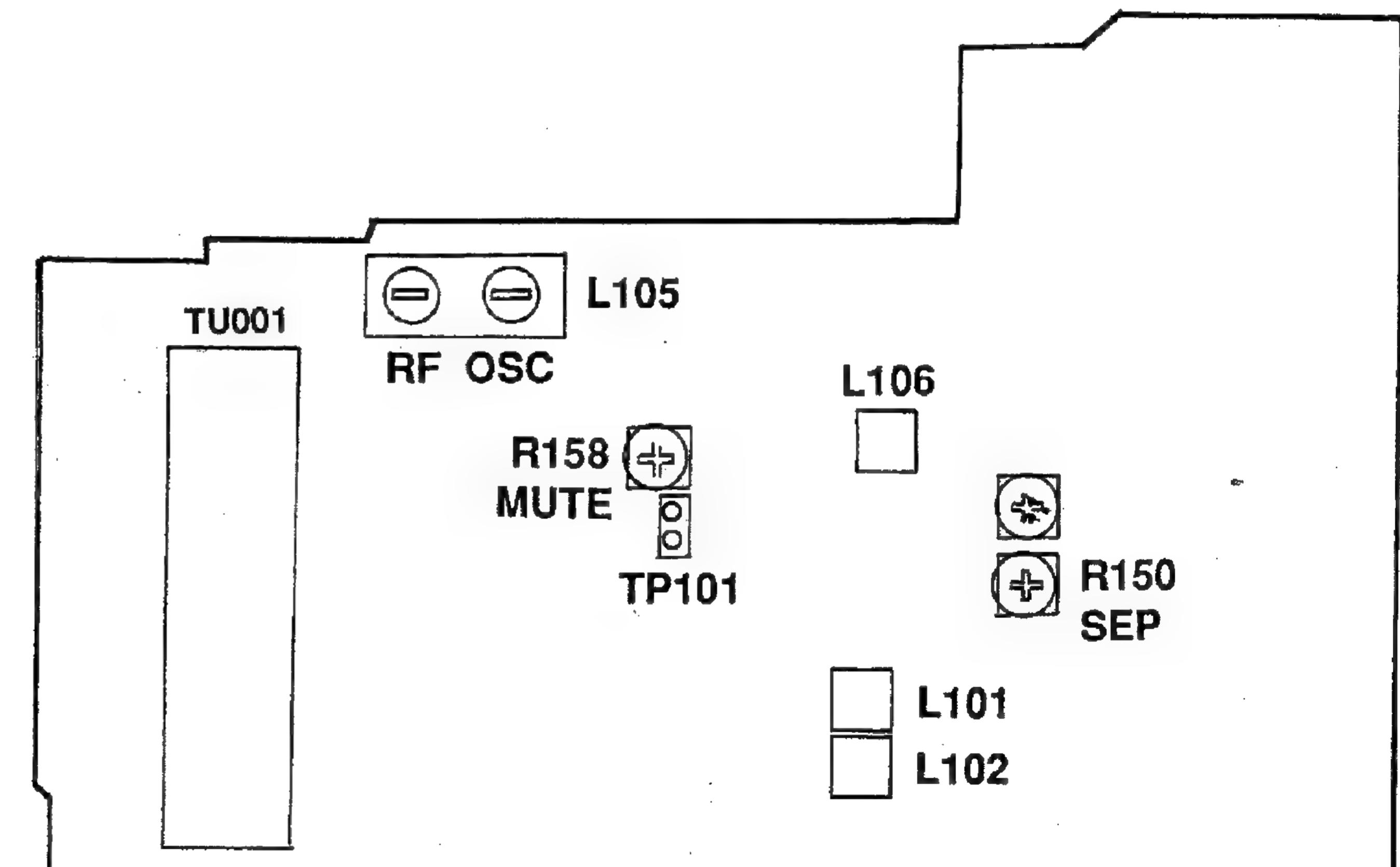
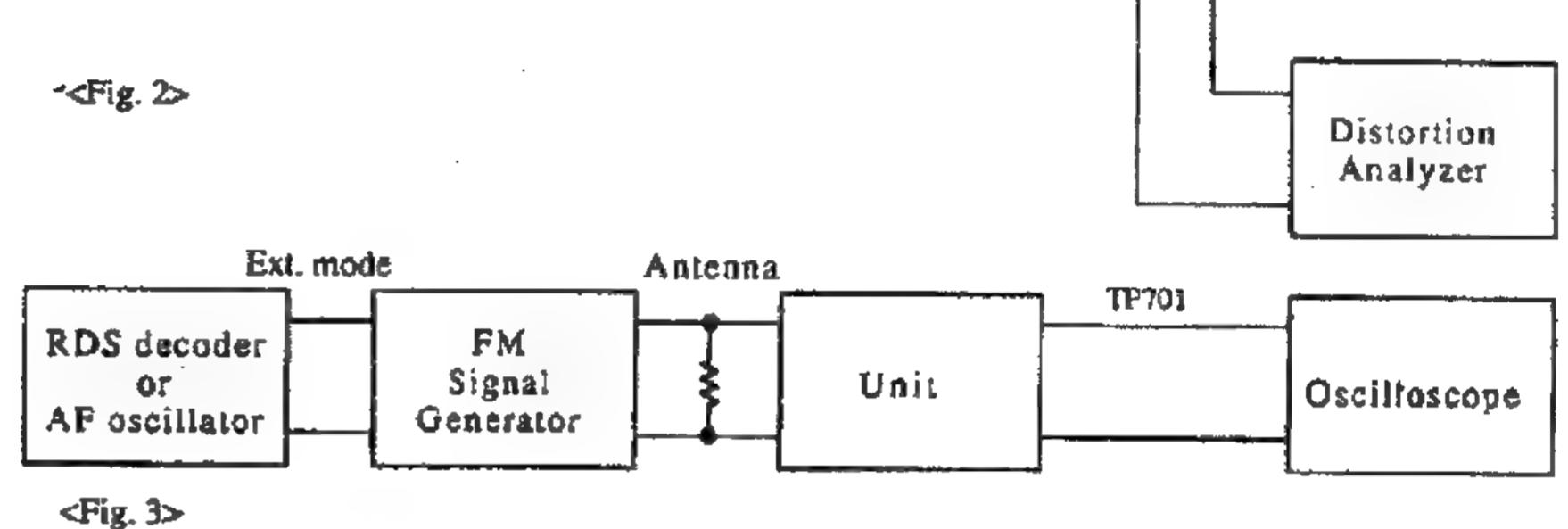
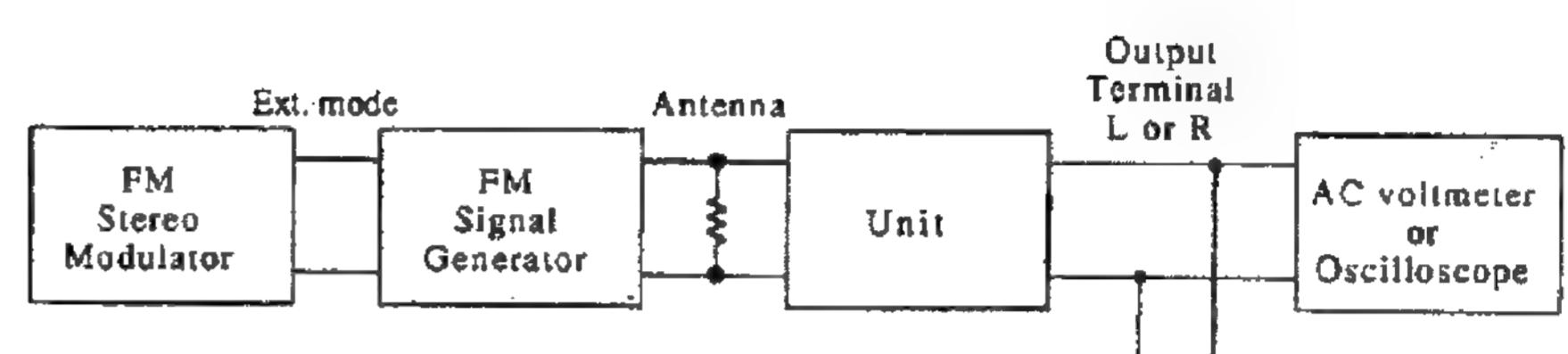
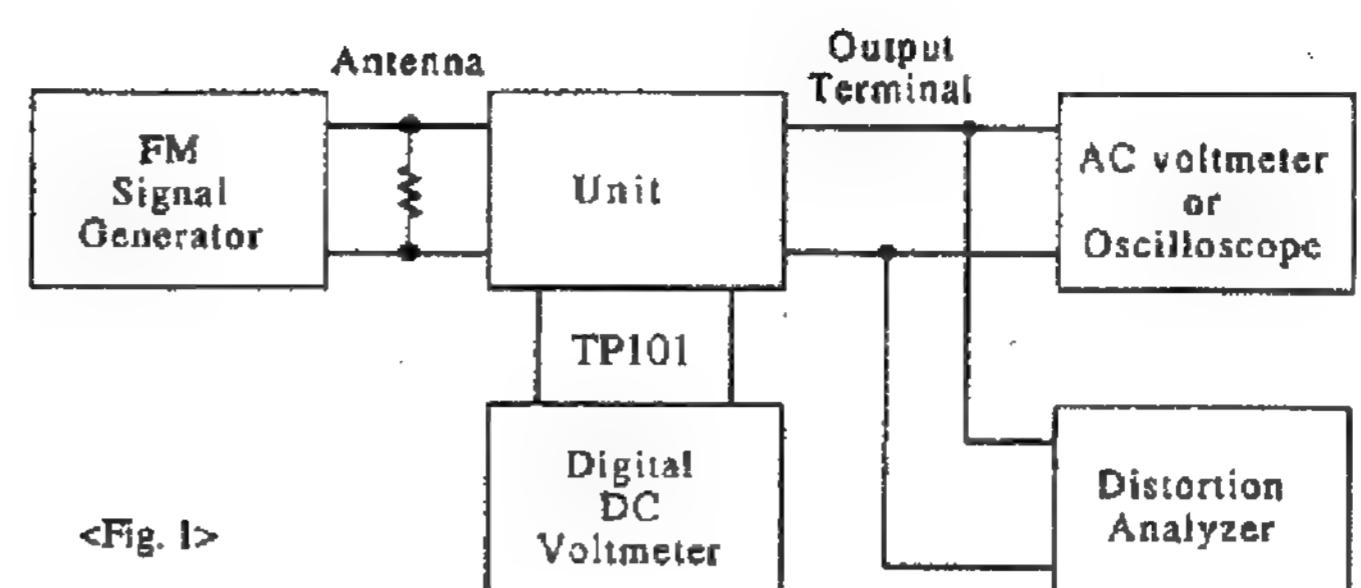
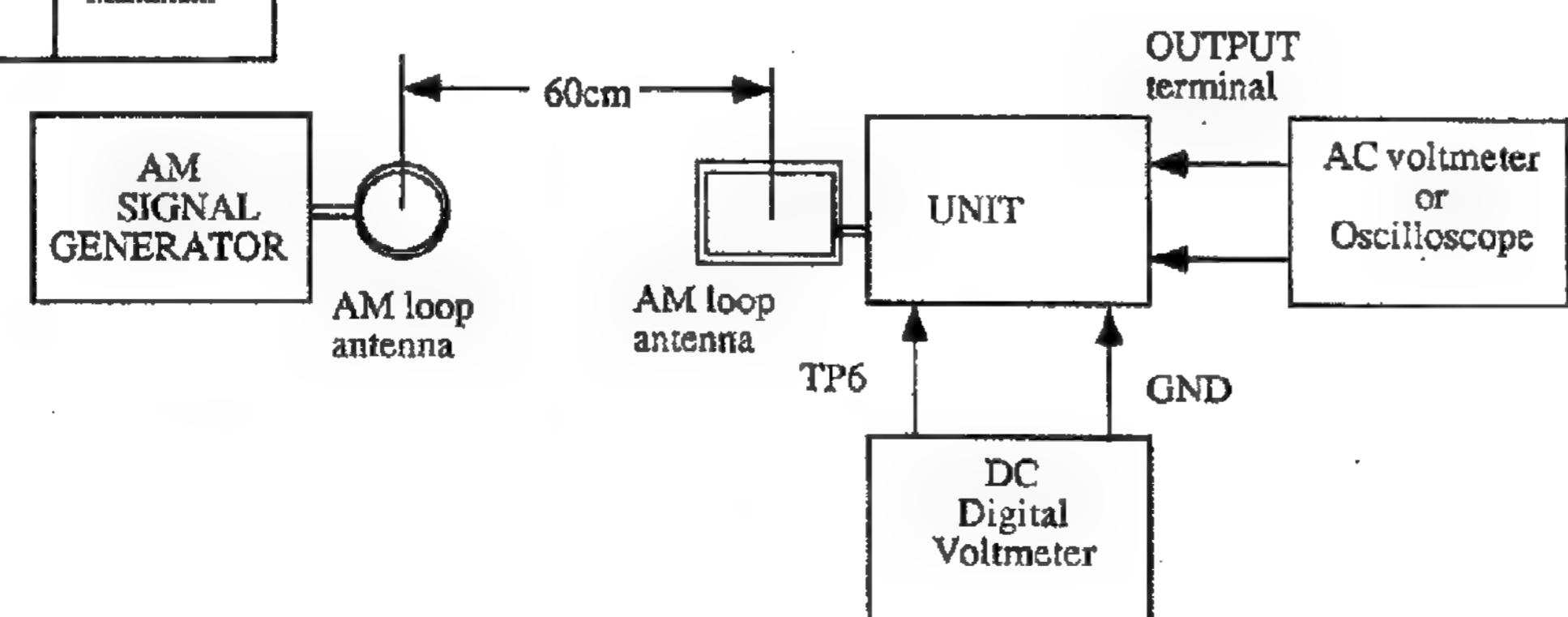
## AM ADJUSTMENT

128U model

| Step | AM SG output                       | Tuning Frequency | Output Indicator     | Adjustment point          | Adjust for |
|------|------------------------------------|------------------|----------------------|---------------------------|------------|
| 1    |                                    | 530kHz           | Digital DC voltmeter | OSC coil on RF block L105 | 1.3±0.1V   |
| 2    | 600kHz<br>400Hz 30% mod.<br>60dB/m | 600kHz           | AC voltmeter         | RF coil on RF block L105  | Maximum    |
| 3    | 990kHz<br>400Hz 30% mod.<br>60dB/m | 990kHz           | AC voltmeter         | L106                      | Maximum    |

230U and worldwide models

| Step | AM SG output                       | Tuning Frequency | Output Indicator     | Adjustment point          | Adjust for |
|------|------------------------------------|------------------|----------------------|---------------------------|------------|
| 1    |                                    | 522kHz or 531kHz | Digital DC voltmeter | OSC coil on RF block L151 | 1.3±0.1V   |
| 2    | 603kHz<br>400Hz 30% mod.<br>60dB/m | 603kHz           | AC voltmeter         | RF coil on RF block L105  | Maximum    |
| 3    | 999kHz<br>400Hz 30% mod.<br>60dB/m | 999kHz           | AC voltmeter         | L106                      | Maximum    |



# PRINTED CIRCUIT BOARD-PARTS LIST

| U1 MAIN CIRCUIT PC BOARD (NAAR-5864-1A/1B) |              | CIRCUIT NO.                         | PART NO.    | DESCRIPTION                                    |
|--|--------------|-------------------------------------|-------------|--|
| CIRCUIT NO.                                | PART NO.     | DESCRIPTION                         |             |  |
|  | ICs          |                                     |             |  |
| Q301                                       | 222502       | NJM4558D-X                          | C513,C514   | 220 $\mu$ F,6.3V, Elect.                       |
| Q302                                       | 22240881     | TC9273N-010                         | C515,C516   | 470 $\mu$ F,50V, Elect.                        |
| Q401,Q402                                  | 22240250     | NJM2068L-D                          | C521,C522   | 47 $\mu$ F,50V, Elect.                         |
| Q481                                       | 22240239     | TA7291S                             | C529,CS30   | 0.1 $\mu$ F $\pm$ 5%,50V, Plastic              |
| Q921                                       | 222780125NEC | MPC78M12AHF                         | C581        | 100 $\mu$ F,6.3V, Elect.                       |
| Q922                                       | 222790125    | 79M12HF                             | C911        | 0.01 $\mu$ F $\pm$ 5%, 100V, Plastic           |
| Q923                                       | 222780565JRC | NJM78M56FA                          | C915,C916   | 6800 $\mu$ F,50V, Elect.                       |
|  | Transistors  |                                     |             |  |
| Q491,Q492                                  | 2213631      | RN1241-A                            | C918        | 1000 $\mu$ F,35V, Elect.                       |
| Q493                                       | 2213510 or   | DTA114ES or                         | C919        | 330 $\mu$ F,35V, Elect.                        |
|  | 2214350      | RN2202                              | C922-C925   | 10 $\mu$ F,50V, Elect.                         |
| Q501-Q504                                  | 2211733 or   | * 2SC1845-B or                      | C926        | 100 $\mu$ F,35V, Elect.                        |
|  | 2211732      | * 2SC1845-F                         | C928        | 100 $\mu$ F,50V, Elect.                        |
| Q505,Q506                                  | 2211353      | 2SA949-O                            | C932        | 10 $\mu$ F,50V, Elect.                         |
| Q507,Q508                                  | 2211733 or   | 2SC1845-E or                        | C983        | 0.01 $\mu$ F $\pm$ 5%,50V, Plastic             |
|  | 2211732      | 2SC1845-F                           |             | Resistors                                      |
| Q509,Q510                                  | 2213284      | 2SC1740S-R                          | R393        | 5104288  |
| Q511,Q512                                  | 2211353      | 2SA949-O                            | R409,R415   | N11RCL, 250KWT20Z, Variable                    |
| Q513,Q514                                  | 2211633      | 2SC2229-O                           | R511,R512   | N14RLC, 100KWT20Z, Variable                    |
| Q515,Q516                                  | 2213284      | 2SC1740S-R                          | R529-R532   | $\Delta$ 56ohm $\pm$ 5%, 1/2W, Metal oxide     |
| Q517,Q518                                  | 2203010      | * 2SC5171                           | R533,R534   | $\Delta$ 68ohm $\pm$ 5%,1/2W, Metal oxide      |
| Q519,Q520                                  | 2203000      | * 2SA1930                           | R539,R540   | N06HR, 2KBC, Trim                              |
| Q525,Q526                                  | 2211733 or   | 2SC1845-E or                        | R541,R542   | $\Delta$ 68ohm $\pm$ 5%,1/2W, Metal oxide      |
|  | 2211732      | 2SC1845-F                           | R545,R546   | $\Delta$ 56ohm $\pm$ 5%, 1/2W, Metal oxide     |
| Q527,Q528                                  | 2211353      | 2SA949-O                            | R551,R552   | RGC55, 0.22OHMK, Metal Plate                   |
| Q529,Q530                                  | 2211633      | 2SC2229-O                           | R563,R564   | 8.2ohm $\pm$ 5%,1W, Metal                      |
| Q581,Q582                                  | 2211733 or   | 2SC1845-E or                        | R565,R566   | 2.2ohm $\pm$ 5%,1/2W, Metal                    |
|  | 2211732      | 2SC1845-F                           | R581,R582   | 390ohm $\pm$ 5%,1W, Metal oxide                |
| Q583                                       | 2211792      | 2SA992-F                            | R583-R586   | $\Delta$ 330ohm $\pm$ 5%,1/2W, Metal oxide     |
| Q591-Q593                                  | 2213640      | DTC123JS                            | R933        | $\Delta$ 2.2ohm $\pm$ 5%,1/2W, Metal           |
| Q924                                       | 2211455      | 2SA1015-GR                          |             | 47ohm $\pm$ 5%,1/2W, Metal oxide               |
|  | Diodes       |                                     |             | Relays   |
| D501,D502                                  | 22380260 or  | RL1N4003 or                         | RL591,RL592 | RL-2P5A-DC24-098 or                            |
|  | 22380032     | 1SR139-100, GP104003E               |             | 25065485                                       |
| D591,D592                                  | 223163       | ISS133                              | P211a       | NRL-2P2A-DC24-086                              |
| D915-D921                                  | 22380260 or  | $\Delta$ RL1N4003 or                | P611a       | Plugs  |
|  | 22380032     | $\Delta$ 1SR139-100, GP104003E      | P612a       | NPLG-13P665                                    |
| D922                                       | 224472704    | MTZJ27D, Zener                      | P613a       | NPLG-8P634                                     |
| D923,D924                                  | 223163       | ISS133                              |             | NPLG-8P660                                     |
|  | Coils        |                                     |             | NPLG-12P664                                    |
| L501,L502                                  | 231176S      | S-1.3C                              | P301        | Pin Jack                                       |
|  | Capacitors   |                                     | P302,P303   |  |
| C303,C304                                  | 354741009    | 10 $\mu$ F,16V, Elect.              | P501        | NPJ-4PDBL281 or                                |
| C307,C308                                  | 354721019    | 100 $\mu$ F,6.3V, Elect.            |             | 25045303                                       |
| C309,C310                                  | 374726224    | 6200pF $\pm$ 5%,50V, Plastic        | P521,P522   | NPJ-4PDBL162                                   |
| C311,C312                                  | 374721824    | 1800pF $\pm$ 5%,50V, Plastic        |             | NPJ-6PDBL279 or                                |
| C313-C316                                  | 354741009    | 10 $\mu$ F,16V, Elect.              |             | 25045300                                       |
| C391,C392                                  | 374721015    | 100pF $\pm$ 10%,50V, Plastic        | P371        | NPJ-6PDBL159                                   |
| C401,C402,C407                             | 354741009    | 10 $\mu$ F, 16V, Elect.             |             | NPJ-1PDBL280 or                                |
| C411,C412                                  | 354741009    | 10 $\mu$ F, 16V, Elect.             |             | NPJ-1PDBL161                                   |
| C421,C422                                  | 374721534    | 0.015 $\mu$ F $\pm$ 5%,50V, Plastic |             | Terminals                                      |
| C408                                       | 354741009    | 10 $\mu$ F,16V, Elect.              | P501        | NTM-8PDML146 or                                |
| C433,C434                                  | 374721534    | 0.015 $\mu$ F $\pm$ 5%,50V, Plastic |             | 25060224 or                                    |
| C435,C436                                  | 374721015    | 100pF $\pm$ 10%,50V, Plastic        | P521,P522   | NTM-8PDML084                                   |
| C441                                       | 354721019    | 100 $\mu$ F,6.3V, Elect.            |             | 25060158                                       |
| C442                                       | 354780479    | 4.7 $\mu$ F,50V, Elect.             |             | 2P-5   |
| C501,C502                                  | 354781009    | 10 $\mu$ F,50V, Elect.              |             | Radiators                                      |
| C503,C504                                  | 374721015    | 100pF $\pm$ 10%,50V, Plastic        |             |  |
| C507,C508                                  | 354724719    | 470 $\mu$ F,6.3V, Elect.            |             | RAD-67   |
|  |              |                                     |             |  |
|  |              |                                     |             | U2 POWER SUPPLY PC BOARD (NAETC-5866-1A/1B)    |
| CIRCUIT NO.                                | PART NO.     | DESCRIPTION                         |             |  |
|  |              |                                     |             |  |
|  |              |                                     |             | Resistors                                      |
|  | R921,R922    | 453530104                           |             | $\Delta$ 1ohm $\pm$ 5%,1/2W, Metal             |
|  |              |                                     |             |  |
|  |              |                                     |             | U4 DISPLAY CIRCUIT PC BOARD (NADIS-5871-1A/1F) |
| CIRCUIT NO.                                | PART NO.     | DESCRIPTION                         |             |  |
|  |              |                                     |             |  |
|  |              |                                     |             | IC   |
|  | Q701         | 22241055 or                         |             | MPD78043FGF-017 or                             |

| CIRCUIT NO.   |                      |   | DESCRIPTION            |                 |  |
|---------------|----------------------|---|------------------------|-----------------|--|
| Q751          |                      |   | 22241056               | MPD78P044GF-343 |  |
| Transistors   |                      |   | 22240679               | MPC1346CS <P>   |  |
| Q703          | 221282               | DTC144ES                                  | Q121                   | 22240090        | LM7001                                   |
| Q705,Q706     | 2213284              | 2SC1740S-R                                | Q141                   | 22240983        | LA1851N-F                                |
| Q707          | 2213510              | DTA114ES                                  | Q253                   | 222840661       | 4066B                                    |
| FL Tube       |                      |   | ICs                    |                 |  |
| Q702          | 212156               | 12-BT-101GK                               | Q101                   | 2210746         | 2SC945A-P <P>                            |
| Diodes        |                      |   | Q102                   | 2211723         | 2SC1923-O                                |
| D701,D702     | 223163 or 223205     | 1SS133 or 1SS270A                         | Q122                   | 2213510         | DTA114ES                                 |
| D703          | 224470913            | MTZJ9.1C, Zener                           | Q123                   | 2212445         | 2SK365-GR                                |
| D704,D705     | 223163 or 223205     | 1SS133 or 1SS270A                         | Q124                   | 2213284         | 2SC1740S-R                               |
| D706,D707     | 224470562            | MTZJ5.6B, Zener                           | Q142                   | 2213510         | DTA114ES                                 |
| D708          | 223163 or 223205     | 1SS133 or 1SS270A                         | Q143                   | 221282          | DTC144ES                                 |
| D709          | 225290               | SEL4110R, LED                             | Q144                   | 2213640         | DTC123JS                                 |
| D710-D712     | 223163 or 223205     | 1SS133 or 1SS270A                         | Q171,Q172              | 2213284         | 2SC1740S-R                               |
| D751          | 223163 or 223205     | 1SS133 or <P>                             | Q173,Q174              | 2212794         | 2SD1468-R                                |
| Coils         |                      |   | Q175                   | 2213510         | DTA114ES                                 |
| L701-L703     |                      |   | Q182                   | 2213284         | 2SC1740S-R <P,W,K>                       |
| Resonators    |                      |   | Diode                  |                 |  |
| X701          | 3010163              | CST-4.19MGW, Ceramic                      | D165                   | 224470512       | MTZJ5.1B, Zener                          |
| X751          | 3010203              | AF6146CG <P>                              | Coils and Transformers |                 |  |
| C701          | 3000076 or 3000078   | 0.01F,5.5V,Super                          | L101,L102              | 233457          | NFIF-4081                                |
| C702          | 375524744            | 0.47 $\mu$ F $\pm$ 5%, 50V, Plastic       | L103                   | 233471          | NMC-6084 <P>                             |
| C703          | 354721019            | 100 $\mu$ F,6.3V,Elect.                   | L104                   | 233454K220      | NCH-1452, 220K                           |
| C704-C707     | 353780109            | 1 $\mu$ F(S),50V,Elect.                   | L105                   | 232174          | NMRF-5077, RF Block                      |
| C709,C711     | 354721019            | 100 $\mu$ F,6.3V,Elect.                   | L106                   | 232139          | NMIF-4062, IF Trans                      |
| C751          | 354721019            | 100 $\mu$ F,6.3V,Elect. <P>               | L107                   | 233484          | NMC-4085 <P>                             |
| C754          | 374724724            | 4700pF $\pm$ 5%,50V,Plastic <P>           | L108                   | 233484          | NMC-4085 <P>                             |
| C755,C756     | 374723324            | 3300pF $\pm$ 5%,50V,Plastic <P>           | L109,L110              | 231092          | NCH-2140                                 |
| C757          | 354780229            | 2.2 $\mu$ F,50V,Elect. <P>                | Ceramic Filters        |                 |  |
| C758          | 374724734            | 0.047 $\mu$ F $\pm$ 5%,50V,Plastic <P>    | X101                   | 3010071         | SFE10.7MA5, (RED)                        |
| C759          | 374722234            | 0.022 $\mu$ F $\pm$ 5%,50V,Plastic <P>    | X102                   | 3010130         | SFE10.7MZ2A <P>                          |
| C760          | 374724724            | 4700pF $\pm$ 5%,50V,Plastic <P>           | X103                   | 3010071         | SFE10.7MA5, (RED)                        |
| Resistors     |                      |   | Resonators             |                 |  |
| R708          | 49163103412          | RM1/10II, 10K*12, Net                     | X104                   | 3010268         | CSB456P23                                |
| R786          | 5210265              | N06HR, 50KBC, Trim <P>                    | X105                   | 3010123         | SFZ-45OJL                                |
| Switches      |                      |   | X121                   | 3010141 or      | XTL-7.2M, Crystal                        |
| S701-S713     | 25035652             | NPS-111-S604                              | C001                   | 354741019       | 100 $\mu$ F,16V, Elect.                  |
| S715-S724     | 25035652             | NPS-111-S604                              | C127                   | 354721019       | 100 $\mu$ F,6.3V, Elect.                 |
| S731-S738     | 25035652             | NPS-111-S604                              | C130                   | 354780229       | 2.2 $\mu$ F, 50V,Elect.                  |
| S739          | 25035653             | NPS-122-L605, P SW <P>                    | C131                   | 374722234       | 0.022 $\mu$ F, $\pm$ 10%, 50V,Plastic    |
| Socket        |                      |   | C132                   | 354783399       | 0.33 $\mu$ F,50V, Elect.                 |
| P711b         | 25051875 or 25051335 | NSCT-31P1662 or NSCT-31P1124, NSCT-31P727 | C133,C142              | 354741019       | 100 $\mu$ F,16V, ELECT C                 |
| Plug          |                      |   | C145                   | 354741009       | 10 $\mu$ F,16V, Elect.                   |
| TP701         | 25055038             | NPLG-2P29 <P>                             | C146                   | 374723324       | 3300pF, $\pm$ 5%,50V,Plastic             |
| Remote Sensor |                      |   | C147                   | 374721034       | 0.01 $\mu$ F $\pm$ 5%, 50V,Plastic <P>   |
| U701          | 24130011             | PIC-12043TE2                              | C147                   | 374721534       | 0.015 $\mu$ F $\pm$ 5%,50V,Plastic <D,T> |
| Holder        |                      |   | C149                   | 354780479       | 4.7 $\mu$ F,50V, Elect.                  |
| 27190989      |                      |   | C151,C152              | 354780109       | 1 $\mu$ F,50V, Elect.                    |
| FL Display    |                      |   | C153                   | 354783399       | 0.33 $\mu$ F,50V, Elect.                 |
|               |                      |   | C154                   | 354741009       | 10 $\mu$ F, 16V,Elect.                   |
|               |                      |   | C155                   | 374721034       | 0.01 $\mu$ F $\pm$ 5%,50V,Plastic <D>    |
|               |                      |   | C155                   | 374724724       | 4700pF $\pm$ 5%,50V,Plastic <P,K,A>      |
|               |                      |   | C155                   | 374725624       | 5600pF $\pm$ 5%,50V,Plastic <W,T>        |
|               |                      |   | C156                   | 374721034       | 0.01 $\mu$ F $\pm$ 5%,50V,Plastic <D>    |
|               |                      |   | C156                   | 374724724       | 4700pF $\pm$ 5%,50V,Plastic <P,K,A>      |
|               |                      |   | C156                   | 374725624       | 5600pF $\pm$ 5%,50V,Plastic <W,T>        |
|               |                      |   | C159                   | 354780229       | 2.2 $\mu$ F,50V, Elect.                  |
|               |                      |   | C160                   | 354784799       | 0.47 $\mu$ F,50V, Elect.                 |

| CIRCUIT NO.   | PART NO.             | DESCRIPTION                                   | CIRCUIT NO. | PART NO.             | DESCRIPTION                        |
|---|----------------------|---|-------------|----------------------|------------------------------------|
| C162,C166   | 353741009            | 10 $\mu$ F,16V, Elect.                        |             | Diodes               |                                    |
| CI71,C172   | 354741009            | 10 $\mu$ F,16V, Elect.                        | D251        | 223163 or 223205     | 1SS133 or 1SS270A                  |
| CI73,C174   | 374721024            | 1000pF $\pm$ 5%,50V,Plastic                   |             | Capacitors           |                                    |
| C177  | 354780229            | 2.2 $\mu$ F,50V, Elect.                       | C251,C252   | 354721019            | 100 $\mu$ F,6.3V, Elect.           |
| C178  | 354741009            | 10 $\mu$ F,16V, Elect.                        | C255,C256   | 354724719            | 470 $\mu$ F,6.3V,Elect.            |
|   | Resistors            |   | C257        | 354721019            | 100 $\mu$ F,6.3V,Elect.            |
| R150  | 5210261              | N06HR, 5KBC, Trim                             | C259        | 354741019            | 100 $\mu$ F,16V,Elect.             |
| R158  | 5210264              | N06HR, 30KBC, Trim                            |             | Jack                 |                                    |
|   | Socket               |   | P251        | 25045462 or 25045339 | NPJ-4PDYE283 or NPJ-4PDYE190       |
| P211b   | 25051238             | NSCT-13P1028                                  |             |                      |                                    |
|   | Plug                 |   |             |                      |                                    |
| TP101   | 25055038             | NPLG-2P29                                     |             |                      |                                    |
|   | Terminal             |   |             |                      |                                    |
| PI01  | 25060239 or 25060195 | NTM-4PDML161 or <D> NTM-4PDML117              |             |                      |                                    |
| P101  | 25060222 or 25060117 | NTM-2PDML144 or <P> NTM-2PDML051              |             |                      |                                    |
|   | Front End            |   | S961        | Switch               |                                    |
| TU001   | 240098               | ENV172D1G1 <D>                                |             | 25065286             | NSS-22112, Slide <W>               |
|   | 240102               | FE417-G02 <P/W>                               |             | Jacks                |                                    |
|   | Shield Plate         |   | P961        | 25045481             | NPI-2PDBL299 <W>                   |
|   | 27150394             |   | P962        | 25065425             | M3 Terminal                        |
| <b>U6 POWER SUPPLY CIRCUIT PC BOARD (NAPS-5873-1A/1F)</b> |                      |   |             |                      |                                    |
| CIRCUIT NO.   | PART NO.             | DESCRIPTION                                   | CIRCUIT NO. | PART NO.             | DESCRIPTION                        |
|   |                      |   |             |                      |                                    |
|   | Transistor           |   |             | Jacks                |                                    |
| Q951  | 2213284              | 2SC1740S-R                                    |             | P503                 | 25045255                           |
|   | Diodes               |   |             |                      | YKB21-5009                         |
| D951-D954   | 22380032             | △ ISR139-100                                  |             |                      |                                    |
| D955  | 223163 or 223205     | ISS133 or ISS270A                             |             |                      |                                    |
|   | Transformers         |   |             | ICs                  |                                    |
| T902  | 2300670A             | △ NPT-1111D <D>                               | Q601        | 22240247 or 22240293 | BA15218N or NJM4558L-D             |
|   | 2300671A             | △ NPT-1111P <P,T,A>                           | Q602        | 22241053             | NJW1102AF                          |
|   | 2300672A             | △ NPT-1111DG <W,K>                            | Q604        | 2212600              | DTA124ES                           |
|   | Capacitors           |   | Q605        | 2213160              | DTC124ES                           |
| C901  | 3500191              | △ DE7150F103M, IS C                           | Q606        | 22240025             | LC4966                             |
| C952  | 354742219            | 220 $\mu$ F,16V,Elect.                        | Q611        | 22240247 or 22240293 | BA15218N or NJM4558L-D             |
|   | Resistors            |   | Q651        | 22240995 or 22240686 | NJU9702 or M65830P                 |
| R901  | 431533355            | △ 3.3M ohm, $\pm$ 10%,1/2W, Solid             |             |                      |                                    |
| R951  | 453530824            | 8.2 ohm, $\pm$ 5%,1/2W, Metal                 |             |                      |                                    |
|   | Switch               |   | Q607,Q608   | 2213631              | RN1241-A                           |
| S901  | 25065437             | △ NSS-22157P, Slide <W>                       |             | Diodes               |                                    |
|   | Plug                 |   | D601,D651   | 224470562            | MTZJ5.6B, Zener                    |
| P901a   | 25055675             | NPLG-2P631                                    | D652,D653   | 223163               | 1SS133                             |
|   | Rela                 |   |             |                      |                                    |
| RL901   | 25065515 or 25065508 | △ NRL-1P5A-DC12-096 or <D> NRL-1P10A-DC12-093 | X651        | 3010217              | CST2.04MG040                       |
|   | Fuse Holder          |   |             | Capacitors           |                                    |
| F901a,F902a   | 25050065             | YSH403T <W>                                   | C601,C602   | 354780229            | 2.2 $\mu$ F,50V,Elect.             |
| F903a   | 25050065             | YSH403T <P,T>                                 | C605,C606   | 354781009            | 10 $\mu$ F,50V,Elect.              |
|   | AC Outlet            |   | C607        | 354744709            | 47 $\mu$ F,16V,Elect.              |
| P902  | 25051126             | NSCT-4P913 <D>                                | C608        | 354741019            | 100 $\mu$ F,16V,Elect.             |
| P903  | 25051125             | NSCT-4P912 <P,W,T>                            | C609        | 354762209            | 22 $\mu$ F,35V,Elect.              |
|   |                      |   | C610        | 392842207            | 22 $\mu$ F,16V,Elect.              |
|   |                      |   | C611-C614   | 374721044            | 0.01 $\mu$ F $\pm$ 5%,50V,Plastic  |
|   | Transistors          |   | C615,C616   | 374726814            | 680pF $\pm$ 5%,50V,Plastic         |
| Q251  | 2213284              | 2SC1740S-R                                    | C617,C618   | 374722234            | 0.022 $\mu$ F $\pm$ 5%,50V,Plastic |
| Q252  | 2213284              | 2SC1740S-R                                    | C619-C622   | 354781099            | 0.1 $\mu$ F,50V,Elect.             |
|   |                      |   | C621,C622   | 354781099            | 0.1 $\mu$ F,50V,Elect.             |
|   |                      |   | C623,C624   | 374724734            | 0.047 $\mu$ F $\pm$ 5%,50V,Plastic |
|   |                      |   | C625-C628   | 354782299            | 0.22 $\mu$ F,50V,Elect.            |
| <b>U7 VIDEO CIRCUIT PC BOARD (NAETC-5874-1A/1F)</b>       |                      |   |             |                      |                                    |
| CIRCUIT NO.   | PART NO.             | DESCRIPTION                                   |             |                      |                                    |
|   |                      |   |             |                      |                                    |

| CIRCUIT NO. | PART NO.  | DESCRIPTION                        | CIRCUIT NO. | PART NO.    | DESCRIPTION                        |
|-------------|-----------|------------------------------------|-------------|-------------|------------------------------------|
| C629,C630   | 354780479 | 4.7 $\mu$ F,50V,Elect.             | C808        | 354744709   | 47 $\mu$ F,16V,Elect.              |
| C631        | 35478699  | 0.68 $\mu$ F,50V,Elect.            | C827,C828   | 374724734   | 0.047 $\mu$ F $\pm$ 5%,50V,Plastic |
| C632        | 374724734 | 0.047 $\mu$ F $\pm$ 5%,50V,Plastic | C831        | 354781009   | 10 $\mu$ F,50V,Elect.              |
| C633        | 374725624 | 5600pF $\pm$ 5%,50V,Plastic        | C867,C868   | 354780109   | 1 $\mu$ F,50V,Elect.               |
| C634        | 374725614 | 5600pF $\pm$ 5%,50V,Plastic        | C869,C870   | 354721019   | 100 $\mu$ F,6.3V,Elect.            |
| C635        | 374721024 | 1000pF $\pm$ 5%,50V,Plastic        | C881,C882   | 354780109   | 1 $\mu$ F,50V,Elect.               |
| C636        | 354780479 | 4.7 $\mu$ F,50V,Elect.             | C883,C884   | 354781019   | 100 $\mu$ F,50V,Elect.             |
| C637        | 354722219 | 220 $\mu$ F,6.3V,Elect.            |             |             | Resistors                          |
| C638        | 354781099 | 0.1 $\mu$ F,50V,Elect.             | R825,826    | 443526804   | 68ohm $\pm$ 5%,1/2W, Metal Oxid    |
| C639-C643   | 354781009 | 10 $\mu$ F,50V,Elect.              | R833-R836   | 443526804   | 68ohm $\pm$ 5%,1/2W, Metal Oxid    |
| C644        | 354781099 | 0.1 $\mu$ F,50V,Elect.             | R837        | 5215043     | N08HR, 2KBC, Trim                  |
| C645        | 374724724 | 4700pF $\pm$ 5%,50V,Plastic        | R843,R844   | 443521014   | 100ohm $\pm$ 5%,1/2W, Metal Oxid   |
| C651        | 374722224 | 2200pF $\pm$ 5%,50V,Plastic        | R845,R846   | 4000132     | RGC55, 0.22 OHMK, Metal Plate      |
| C652,C653   | 374725614 | 560pF $\pm$ 5%,50V,Plastic         | R849,R850   | 443521004   | 10ohm $\pm$ 5%,1/2W, Metal Oxid    |
| C654,C655   | 374721044 | 0.1 $\mu$ F $\pm$ 5%,50V,Plastic   | R851,R852   | 453630824   | 8.2ohm $\pm$ 5%,1W, Metal          |
| C656        | 374725624 | 5600pF $\pm$ 5%,50V,Plastic        | R859,R863   | 453530224   | 2.2ohm $\pm$ 5%,1/2W, Metal        |
| C657        | 354744709 | 47 $\mu$ F,16V,Elect.              | R867-R870   | 453530224   | 2.2ohm $\pm$ 5%,1/2W, Metal        |
| C658,C659   | 354781099 | 0.1 $\mu$ F,50V,Elect.             | R873,R874   | 443525604   | 56ohm $\pm$ 5%,1/2W, Metal Oxid    |
| C660        | 354781009 | 10 $\mu$ F,50V,Elect.              |             |             | Relay                              |
| C661,C662   | 354721019 | 100 $\mu$ F,6.3V,Elect.            | RL801       | 25065517 or | NRL-2P5A-DC24-098 or               |
| C681-C684   | 354781009 | 10 $\mu$ F,50V,Elect.              |             | 25065485    | NRL-2P2A-DC24-086                  |

**Resistor**

|       |                    |                             |      |             |                 |
|-------|--------------------|-----------------------------|------|-------------|-----------------|
| R641  | 5104347<br>Sockets | N16RQL, 100KBT25F, Variable | P801 | 25060220 or | NTM-6PDML142 or |
| P611b | 25051127           | NSCT-8P914                  | P821 | 25060191    | NTM-6PDML113    |
| P612b | 25051233           | NSCT-8P1023                 |      | 25060062    | 2P-5            |
| P613b | 25051237           | NSCT-12P1027                |      |             |                 |
|       |                    |                             |      |             |                 |
| P622a | 25055405           | NPLG-3P387                  |      |             |                 |

**U14 CENTER AND REAR AMPLIFIER CIRCUIT PC BOARD  
(NAAF-5869-1A/1B)**

| CIRCUIT NO. | PART NO.   | DESCRIPTION            |
|-------------|------------|------------------------|
|             |            | <b>Transistors</b>     |
| Q803,Q804   | 2211633 or | 2SC2229-O or           |
|             | 2211634    | 2SC2229-Y              |
| Q805,Q806   | 2211353 or | 2SA949-O or            |
|             | 2211354    | 2SA949-Y               |
| Q807-Q810   | 2213284    | 2SC1740S-R             |
| Q811,Q812   | 2211353 or | 2SA949-O or            |
|             | 2211354    | 2SA949-Y               |
| Q813,Q814   | 2211633 or | 2SC2229-O or           |
|             | 2211634    | 2SC2229-Y              |
| Q815,Q816   | 2213284    | 2SC1740S-R             |
| Q817,Q818   | 2203010    | 2SC5171                |
| Q819,Q820   | 2203000    | 2SA1930                |
| Q825,Q826   | 2211733 or | 2SC1845-E or           |
|             | 2211732    | 2SC1845-F              |
| Q831,Q832   | 2211353 or | 2SA949-O or            |
|             | 2211354    | 2SA949-Y               |
| Q833,Q834   | 2211733 or | 2SC1845-E or           |
|             | 2211732    | 2SC1845-F              |
| Q835,Q836   | 2211733 or | 2SC1845-E              |
|             | 2211732    | 2SC1845-F              |
|             |            | <b>Diode</b>           |
| D811        | 223163     | 1SS133                 |
|             |            | <b>Coils</b>           |
| L801,L802   | 231176     | S-1.3C                 |
|             |            | <b>Capacitors</b>      |
| C801,C802   | 354781009  | 10 $\mu$ F,50V,Elect.  |
| C807        | 354742219  | 220 $\mu$ F,16V,Elect. |

NOTE: <D>: 120V model only

<P>: 230V model only

<W>: Worldwide model only

<T> : Taiwanese model only

<K>: Korean model only

<A>: Australian model only

A

B

C

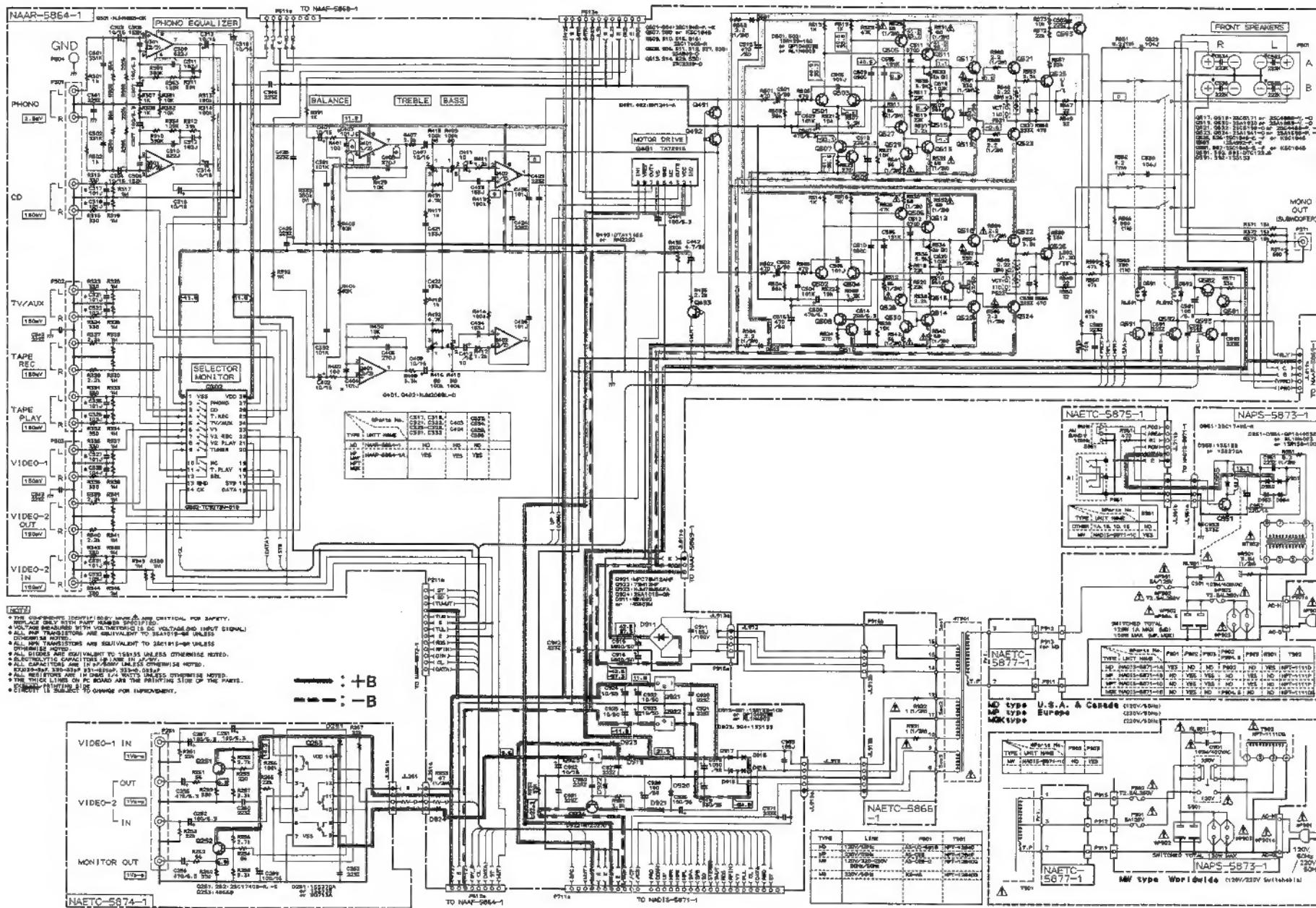
D

E

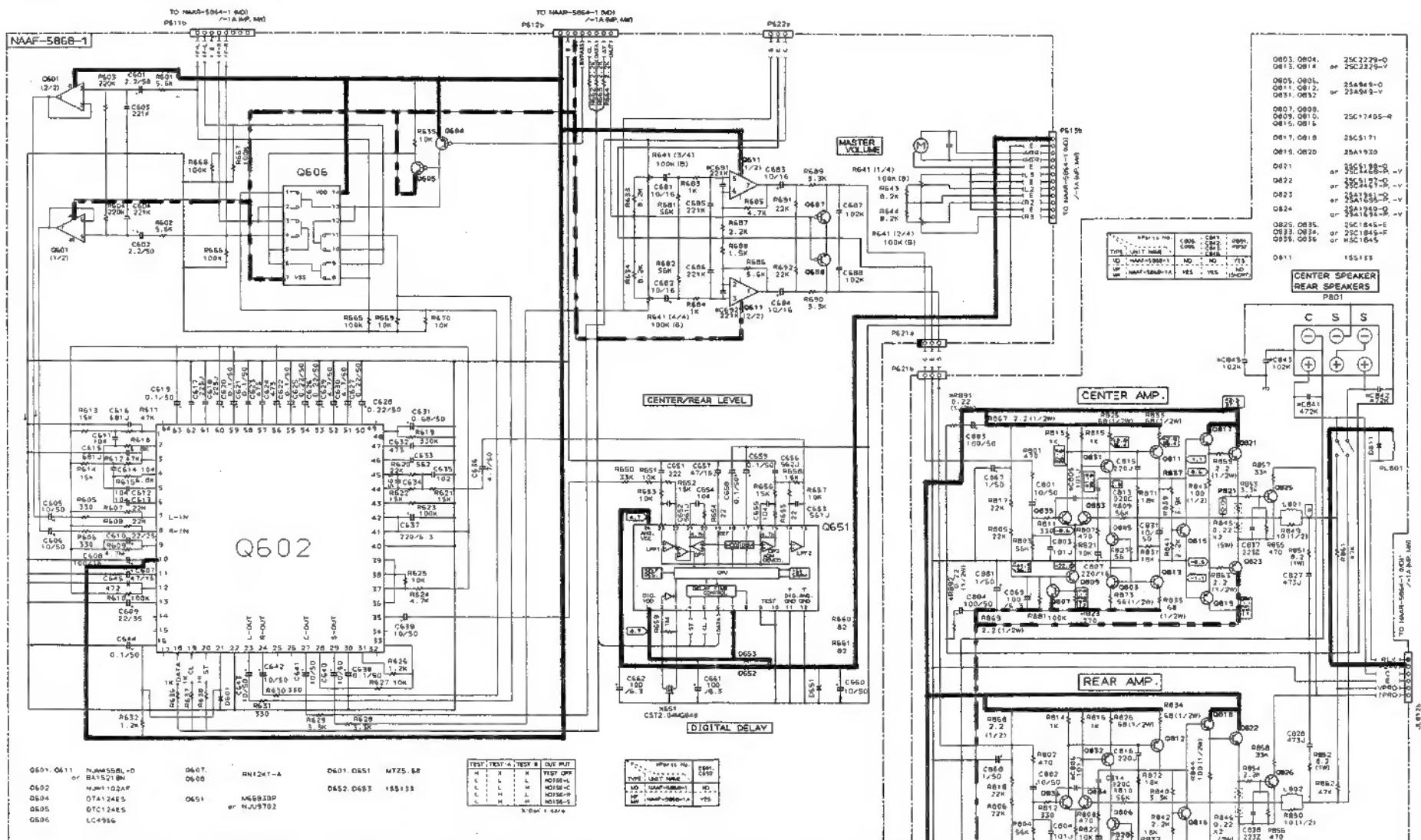
F

G

## SCHEMATIC DIAGRAM PART-1

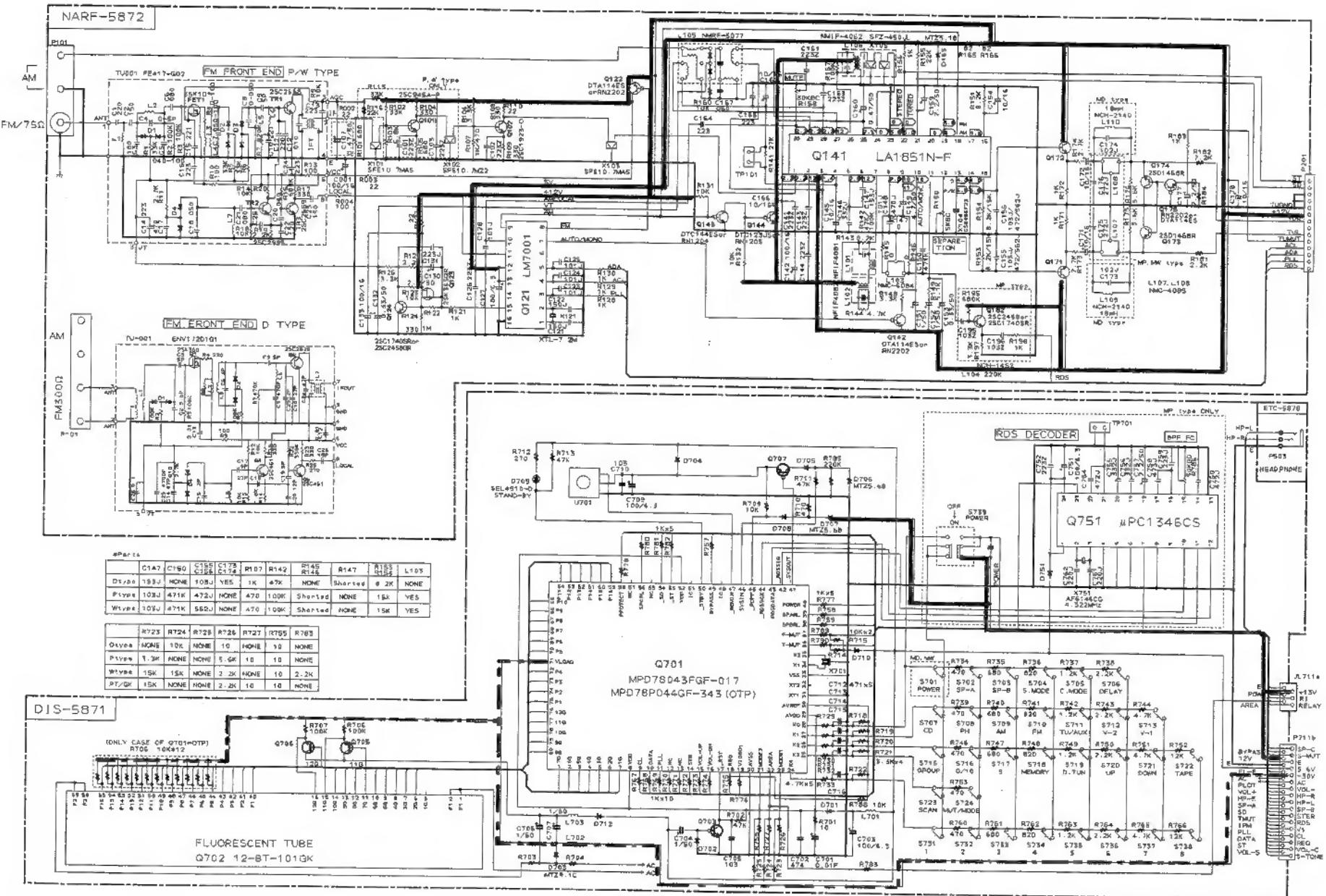


## SCHEMATIC DIAGRAM PART-2



A B C D E F G

SCHEMATIC DIAGRAM PART-3



## **ONKYO CORPORATION**

International Sales Div. : 31 Sankyo-bild, 3-8-5, Asakusabashi, Taito-ku, TOKYO 111, JAPAN  
TEL : 03-5820-5865 FAX : 03-5820-5869

ONKYO U.S.A. CORPORATION  
200 Williams Drive, Ramsey, N.J. 07446, U.S.A.  
TEL : 201-825-7950 FAX : 201-825-8150

ONKYO EUROPE ELECTRONICS GmbH  
Industriestrasse 18-20, 82110 Germering, GERMANY  
TEL : 089 84 93 20 FAX : 089 84 93 226

ONKYO FRANCE  
Immeuble Le Diamant, Domaine Technologique de Saclay, 4 Rue Rene Razet, 91892 SACLAY, FRANCE  
TEL : (1) 69 33 14 00 FAX : (1) 69 41 35 84